

Unit Planning Guide: Grade 5 Unit 4 of 9

Unit Title: Adding and Subtracting Fractions with Unlike Denominators	Pacing (Duration of Unit): 3 Weeks
Grade: 5	Buffer Day(s): 1 week

Desired Results

Transfer Goals (Priority practice standards in **bold**)

Students will be able to independently use their learning to:

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. **Reason abstractly and quantitatively.**
- MP.3. Construct viable arguments and critique the reasoning of others.
- MP.4. **Model with mathematics.**
- MP.5. **Use appropriate tools strategically.**
- MP.6. **Attend to precision.**
- MP.7. Look for and make use of structure.
- MP.8. Look for and express regularity in repeated reasoning.

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

Prerequisite Standards:

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Standards (Priority Standards in **bold**):

- **5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$.)**
- 5.NF.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use

WIDA for English Language Learners

Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting
Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language

benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. <i>For example, recognize an incorrect result $2/5 + 1/2 = 3/7$, by observing that $3/7 < 1/2$.</i>	function expectations and scaffolds or supports.

Meaning (*Mostly assessed through Performance Tasks/Assessments)

<p>Big Ideas:</p> <ul style="list-style-type: none"> Developing fluency with addition and subtraction of fractions 	<p>Essential Questions: (Questions which frame ongoing and important inquiries about the big ideas. They are written for students and used in daily instruction to help engage students in meaningful thinking.)</p> <ul style="list-style-type: none"> How are equivalent fractions helpful when solving problems? How can a model be used to solve a problem with fractions? How can fractions with different denominators be added or subtracted?
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Acquisition (*Mostly assessed through traditional summative assessments)

Knowledge: Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.

Students will know...

- That common denominators are needed in order to add or subtract fractions
- Estimation a tool for assessing reasonableness of answers
- Equivalent fractions represent the same value

Key Academic Vocabulary:

- Common Denominator
- Unlike Denominator
- Like Denominator.
- Mixed Number
- Improper Fraction
- Equivalent Fraction
- Simplest Form
- Unit Fraction
- Benchmark Fraction

Skills: The discrete skills and process students should be able to use independently

Students will be skilled at:

- Converting between mixed and improper fractions for the purpose of adding and subtracting fractions. (Applying)
- Formulating equivalent fractions in order to add and subtract fractions with unlike denominators. (Applying)
- Selecting and Using appropriate visual fraction models to represent addition and subtraction problems. (Analyzing)
- Estimating sums and differences using benchmark fractions. (Understanding)
- Simplifying sums and differences to lowest terms. (Applying)

Resource Suggestions:

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